

**Chief Information Officer
Competency Model June 14 2005**

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Function	Level 1	Level 2	Level 3	Competency Area/Competency Definition	Actions Demonstrating Competency	Training Needed to Develop Competency
Analytical Thinking	X	X	X	* Ability to analyze or assist in identifying project objectives and issues, develop appropriate analytic approaches, and perform analysis in connection with IT projects and tasks.	* Identifies major IT issues pertinent to the assignment	* Research and Analysis classes * Program Management training
	X	X	X	* Identifies and understands issues, problems, and opportunities; compares data from different sources to draw conclusions;	* Utilizes proper research and analytical methods which address project objectives and take into account data acquisition requirements	
		X	X	* Uses effective approaches for choosing a course of action or developing appropriate solutions; takes action that is consistent with available facts, constraints and probable consequences.	* Makes valid conclusions supported by the data * Promptly consults with supervisors to resolve identified problems or need for technical guidance * Adheres to project deadlines and Incorporates supervisory guidance and	

Applications Software		X	X	<p>Work that involves the design, documentation, development, modification, testing, installation, implementation, and support of new or existing applications software. Functions commonly performed by employees assigned to this specialty may include analyzing and refining system requirements; translating system requirements into application prototypes; planning and designing systems architecture; writing, debugging and maintaining code; determining and designing applications architecture; determining output media/formats; designing user interfaces; working with customers to test applications; assuring software and systems quality and functionality; integrating hardware and software components; writing and maintaining program documentation; evaluating new applications software technologies; and/or ensuring the rigorous application of information security/information assurance policies, principles, and practices to the delivery of application software services. Common organizational or functional titles for positions in this specialty include programmer, programmer analyst, applications developer, software engineer, software developer, and software quality assurance specialist.</p>	<p>* Listens appropriately to determine customer requirements</p> <p>*Background in different computer applications to determine which program supports customers needs appropriately</p> <p>* Tests, modifies and integrates IT applications</p> <p>* Documents programs appropriately</p> <p>* Provides appropriate information security to prevent unauthorized disclosure of electronic information</p>	<p>* Customer Service Training</p> <p>* Diverse background in different computer applications including</p> <hr/> <p>* IT Information Library (ITIL)/IT Service Management (ITSM) training and other documentation process training</p> <p>* IT information security classes and knowledge of ITA policies on Information Security</p> <p>*Business requirements analysis</p> <p>*Project Management training</p>
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Communication Skills	X	X	X	Government Writing: Uses correct English grammar, punctuation, and spelling; communicates information (for example, facts, ideas, or messages) in a succinct and organized manner; produces written information, which may include technical material, that is appropriate for the intended audience. Chooses correct style and tone; logical organization; identifies what the reader needs to know. Incorporates research; limits scope and context for greater effectiveness; and appropriate sentence structure and punctuation.	* Demonstrates effective communications skills as evidenced by work products and presentations that are effectively organized, coherent, and concise; meet project requirements; emphasize analytical content; are grammatically correct and in proper format; and incorporate review results. Supervisory guidance and revision are not of such extent as to impede work progress. Work projects are submitted within preparation and review deadlines * Resolves issues and maintains and opens lines that are critical for sharing key information	* Effective Writing classes * Communications and Conflict Management Training * Presentation skills and public speaking classes
	X	X	X	Oral Communication: Conveys information clearly, completely, and accurately.		
		X	X	Presentation Skills: Applies knowledge of an effective presentation; and recognizes, assesses, and addresses key factors to consider when making a presentation. Chooses topics and patterns for presentations; creates appropriate, attention-getting openings; closes presentations with impact and style; enhances presentations with audio-visual aids; and engages audience with effective body language.		

Customer Support	X	X	X	<p>Work that involves the planning and delivery of customer support services, including installation, configuration, troubleshooting, customer assistance, and/or training, in response to customer requirements. Functions commonly performed by employees in this specialty may include: diagnosing and resolving problems in response to customer reported incidents; researching, evaluating, and providing feedback on problematic trends and patterns in customer support requirements; developing and maintaining problem tracking and resolution databases; installing, configuring, troubleshooting, and maintaining customer hardware and software; developing and managing customer service performance requirements; providing customer training; and/or ensuring the rigorous application of information security/information assurance policies, principles, and practices in the delivery of customer support services. Common organizational or functional titles for positions in this specialty include technical support specialist, customer support specialist, help desk representative, and maintenance specialist.</p>	<ul style="list-style-type: none"> * Ability to analyze customer problems * Installs, configures, maintains, and troubleshoots hardware and software * Resolves customers' problem * Tracks customer problems in Remedy * Train Customers in IT processes 	<ul style="list-style-type: none"> * Analysis classes * Software and hardware installation classes *Desktop management and troubleshooting courses based on specific technologies, i.e. Windows 2000, Lotus Notes, etc. *Remedy training * Knowledge and maintenance of Remedy, problem tracking and resolution databases * Oral and written communications skills * ITIL/ITSM Training *Customer service training
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Data Management		X		<p>Work that involves the planning, development, implementation, and administration of systems for the acquisition, storage, and retrieval of data. Functions commonly performed by employees in this specialty may include: analyzing and defining data requirements and specifications; designing, normalizing, developing, installing, and implementing databases; maintaining, monitoring, performance tuning, backup, and recovery of databases; installing, configuring, and maintaining database management systems software. Common organizational or functional titles for positions in this specialty include database developer and database administrator.</p>	<p>* Analyses and defines data requirements and specifications and responds with appropriate software/program support</p> <p>* Develops data policies and procedures</p>	<p>* Knowledge of various database software program applications and their support to customers</p> <p>* Knowledge of CIO's policy and procedures on data dissemination</p> <p>* Knowledge of ITA Information Security policies</p> <p>* Knowledge of database architecture</p> <p>* Knowledge of data management</p> <p>* Knowledge of data warehousing</p>
			X	<p>At the higher levels of this specialty, functions performed may include: analyzing and planning for anticipated changes in data capacity requirements; developing and administering data standards, policies and procedures; developing and implementing data mining and data warehousing programs; evaluating and providing recommendations on new database technologies and architectures; and/or ensuring the rigorous application of information security/information assurance policies, principles, and practices in the delivery of data management services. Common organizational or functional titles for positions in this specialty include data architect, data storage specialist, and data warehouse specialist.</p>	<p>* Provides appropriate information security to prevent unauthorized disclosure of electronic information</p>	

Internet		X	X	<p>Work that involves the technical planning, design, development, testing, implementation, and management of Internet, intranet, and extranet activities, including systems/applications development and technical management of Web sites. This specialty only includes positions that require the application of technical knowledge of Internet systems, services, and technologies. In most cases, the term Internet is used in the standard to refer generically to Internet, intranet, and extranet systems and services. Functions commonly performed by employees in this specialty may include: determining overall technical design and structure of Internet services; monitoring functionality, security, and integrity of Internet services; troubleshooting and resolving technical problems with the design and delivery of Internet services; collecting and analyzing Internet services usage and performance statistics; evaluating new Internet services and technologies; providing technical advice to Internet content providers; and/or ensuring the rigorous application of information security/information assurance policies, principles, and practices in the delivery of Internet services. Common organizational or functional titles in this specialty include: Web developer, Webmaster, Web manager, Web site administrator, Web operations specialist, Internet specialist, Internet developer, and Internet architect.</p>	<p>* Analyzes customer needs</p> <p>* Determines technical design and structure of Internet services</p> <p>* Websites developed provide functionality and security in accordance with ITA standards</p>	<p>* Customer Service classes</p> <p>* Knowledge of software and programming necessary to develop and maintain internet services</p> <p>* Knowledge of ITA Information Security policies</p> <p>*Stellent, wCMS, DMS, RMS training</p> <p>*Training on specific web development tools – JAVA, XML, web services, etc.</p>
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Network Services		X	X	<p>Work that involves the planning, analysis, design, development, testing, quality assurance, configuration, installation, implementation, integration, maintenance, and/or management of networked systems used for the transmission of information in voice, data, and/or video formats. Functions commonly performed by employees in this specialty may include: analyzing and defining network requirements; defining and maintaining network architecture and infrastructure; configuring and optimizing network servers, hubs, routers, and switches; analyzing network workload; monitoring network capacity and performance; diagnosing and resolving network problems; developing network backup and recovery procedures; installing, testing, maintaining, and upgrading network operating systems software; and/or ensuring the rigorous application of information security/information assurance policies, principles, and practices to the delivery of network services. Common organizational or functional titles for positions in this specialty: network administrator, LAN/WAN administrator, network analyst, network designer, and network engineer. Note For positions requiring a paramount knowledge of telecommunications methods and systems, see the GS-391 Telecommunications Series.</p>	<p>* Sophisticated knowledge of network architecture in order to support a world wide system</p> <p>* Plans, analyzes, designs, develops, tests, assures quality, configures, installs, implements, integrates, maintains and managements network systems to provides voice, data and video information without interruption</p> <p>* Downloads of software to servers worldwide is accomplished with little downtime</p> <p>* Ability to function well under pressure in order to address network outages</p>	<p>* Network architecture design, testing, quality assurance, installation, maintenance and management systems classes</p> <p>* Network architecture infrastructure classes</p> <p>* ITIL/ITSM knowledge</p> <p>*MS Windows Operating System training (WIN 2000 and above)</p> <p>*Training in LAN/WAN, System Management, IT Security & Disaster Recovery</p> <p>* Stress Management classes</p>
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Operating Systems	X	X	X	<p>Work that involves the planning, installation, configuration, testing, implementation, and management of the systems environment in support of the organization's IT architecture and business needs. Functions commonly performed by employees in this specialty may include: analyzing systems requirements in response to business requirements, risks, and costs; evaluating, selecting, verifying, and validating the systems software environment; evaluating, selecting, and installing compilers, assemblers, and utilities; integrating hardware and software components within the systems environment; monitoring and fine-tuning performance of the systems environment; evaluating new systems engineering technologies and their effect on the operating environment, and/or ensuring that information security/information assurance policies, principles, and practices are an integral element of the operating environment. Common organizational or functional titles for positions in this specialty include: systems programmer, systems software programmer, systems engineer, and systems software engineer.</p>	<ul style="list-style-type: none"> * Ability to analyzes system requirements in accordance with business requirements * Selects equipment * Installs equipment * Integrates hardware and software components * Monitors and fine tunes system performance * Evaluates new systems technologies on operating equipment * Ensures that IT is maintained 	<ul style="list-style-type: none"> * IT architecture training * Operating Systems training (WIN 2000 and above) * ITIL/ITSM training
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Policy and Planning			X	<p>Work that involves a wide range of IT management activities that typically extend and apply to an entire organization or major components of an organization. This includes strategic planning, capital planning and investment control, workforce planning, policy and standards development, resource management, knowledge management, architecture and infrastructure planning and management, auditing, and information security management. Functions commonly performed by employees in this specialty may include: developing and maintaining strategic plans; assessing policy needs and developing policies to govern IT activities; providing policy guidance to IT management, staff, and customers; defining current and future business environments; preparing IT budgets; managing IT investment portfolios; establishing metrics to measure and evaluate systems performance and total cost of ownership; identifying and addressing IT workforce planning and management issues, such as recruitment, retention, and training; conducting audits of IT programs and projects; and/or ensuring the rigorous application of information security/information assurance policies, principles, and practices in the delivery of planning and management services. Common organizational or functional titles for positions in this specialty include: enterprise resource planner, IT policy and planning analyst, IT program management specialist, and IT auditor.</p>	<ul style="list-style-type: none"> * Develops and maintains strategic plans * Develops and maintains capital plans * Develops budgets * Develops workforce plans, policy and standards development * Conducts resource management * Manages corporate knowledge * Conducts Architecture and infrastructure planning 	<ul style="list-style-type: none"> * Strategic Planning classes * Capital planning and investment control classes * Government budget process classes * Integrating Budget and Performance – Performance based management * Workforce planning classes * Project Management classes * Architecture planning classes * ITIL/ITSM training * Acquisition/procurement training * Research and analysis training * Strategic planning * IT security training * Basic systems and
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Research and Analysis Skills	X	X	X	Problem Solving/Decision Making: Identifies and understands issues, problems, and opportunities; compares data from different sources to draw conclusions; uses effective approaches for choosing a course of action or developing appropriate solutions; takes action that is consistent with available facts, constraints and probable consequences.	The ability to recognize competing variables in the variables in the IT process	* IT research and analysis classes * Program Management training
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Security		X	X	<p>Work that involves ensuring the confidentiality, integrity, and availability of systems, networks, and data through the planning, analysis, development, implementation, maintenance, and enhancement of information systems security programs, policies, procedures, and tools. Functions commonly performed by employees in this specialty may include: developing policies and procedures to ensure information systems reliability and accessibility and to prevent and defend against unauthorized access to systems, networks, and data; conducting risk and vulnerability assessments of planned and installed information systems to identify vulnerabilities, risks and protection needs; promoting awareness of security issues among management and ensuring sound security principles are reflected in organizations' visions and goals; conducting systems security evaluations, audits, and reviews; developing systems contingency plans and disaster recovery procedures; developing and implementing programs to ensure that systems, network, and data users are aware of, understand, and adhere to systems security policies and procedures; participating in network and systems design to ensure implementation of appropriate systems security policies; facilitating the gathering, analysis, and preservation of evidence used in the prosecution of computer crimes; assessing security events to determine impact and implementing corrective actions; and/or ensuring the rigorous application of information security/information assurance policies, principles, and practices in the delivery of all I T services. Common organizational or functional titles for positions in this specialty include information systems security analyst/specialist, information systems security officer, network security officer, and information assurance analyst/specialist.</p>	<ul style="list-style-type: none"> * Writes policies to protect information * Inspects server rooms, hub sites etc to ensure protection of information * Conducts risk and vulnerability assessments of planned and installed information systems to identify vulnerability risks and protection needs * Participates in system design to ensure implementation of appropriate information security policies * Coalition building skills to ensure coordination with other agencies to ensure information is protected * Promotes information security * Develop system contingency plans and disaster recovery procedures * Facilitates the gathering, analysis, and preservation of evidence used in the prosecution of computer crimes 	<ul style="list-style-type: none"> * Knowledge of US Government information security policies * IT architecture training *HSPD12 *FIPS/NIST Standards * IT and Project Management Risk assessment classes * IT architecture training * Systemic Leadership classes * Knowledge of US government information security policies and Information Security mandatory training * IT architecture training and Department of Homeland Security (DHS) IT COOP training * DOC information security training and DHS Information Security Training * ITIL/ITSM training *Basic system and network training *Operating System training *Research and analysis training *Certification and accreditation training
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Systems Administration			X	<p>Work that involves the planning and coordinating the installation, testing, operation, troubleshooting, and maintenance of hardware and software systems. Functions commonly performed by employees in this specialty may include: planning and scheduling the installation of new or modified hardware and operating systems and applications software; managing accounts, network rights, and access to systems and equipment; managing systems resources including performance, capacity, availability, serviceability, and recoverability; implementing security procedures and tools; developing and documenting systems administration standard operating procedures; resolving hardware/software interface and interoperability problems; ensuring systems availability, functionality, integrity, and efficiency; maintaining systems configuration; managing the installation and integration of system fixes, updates, and enhancements; and/or ensuring the rigorous application of information security/information assurance policies, principles, and practices to the systems administration process. Common organizational or functional titles for positions in this specialty include: systems administrator, site administrator, and UNIX/Windows systems administrator.</p>	<ul style="list-style-type: none"> * Plans coordinates, installs, tests, troubleshoots and maintains hardware, software and operating systems * Manages access to systems and equipment * Manages systems resources including performance, capacity, availability, serviceability, and recoverability * Resolve Hardware/software interoperating problems 	<ul style="list-style-type: none"> *Classes in software and operating systems administration *Systems management training *Networking training * ITIL/ITSM training * IT architecture classes * IT architecture and operating systems training *IT Security training *Analysis training *Quality Management training *Project Management training
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Systems Analysis		X	X	<p>Work that involves applying analytical processes to the planning, design and implementation of new and improved information systems to meet the business requirements of customer organizations. Functions commonly performed by employees in this specialty may include: performing needs analyses to define opportunities for new or improved business process solutions; consulting with customers to identify and specify requirements; developing overall functional and systems requirements and specifications; conducting business process reengineering; conducting feasibility studies and trade-off analyses; preparing business cases for the application of I T solutions; defining systems scope and objectives; developing cost estimates for new and modified systems; ensuring the integration of all systems components, e.g., procedures, databases, policies, software, and hardware; plans systems implementation; and/or ensuring the rigorous application of information security/information assurance policies, principles, and practices to the systems analysis process. Common organizational or functional titles for positions in this specialty include: systems analyst, and business analyst.</p>	<ul style="list-style-type: none"> * Analyses systems in accordance with business requirements to meet customer needs * Conducts business process reengineering * Prepares business case analysis of IT solutions * Integrates system components including procedures, databases, policies, software, hardware * Define systems scope and objective and develops cost estimates 	<ul style="list-style-type: none"> * Classes in diverse programming and operating systems * Customer Services classes * Analysis classes *Project Management classes *IT architecture *Program Management *Systems Management Training *IT Security training *Networking training *Operating Systems training *USG Budget and Financial Management training
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